

WHAT IS CLAIMED IS:

1. A system of discourse analysis usable to analyze a text, comprising:
  - a modifier determining circuit that determines if a unit of text provides context setting information for information encoded further along in a text;
  - 5 a operator determining circuit that determines if a unit of text provides at least one of: commentary on aspects of organization structure; logical structure; and expressing emotional reaction to a context;
  - a content determining circuit that determines if a unit of text is a property of some entity and provides expression of at least one of: state; action; and belief;
  - 10 a coordination determining circuit that links a second unit of text to a first unit of text in a structural representation of discourse, where the second unit of text continues a discourse activity begun or continued by the first unit of text;
  - a subordination determining circuit that links the second unit of text to the first unit of text in a structural representation of discourse if the second unit of text
    - 15 elaborates upon or interrupts the discourse activity begun by the first unit of text;
    - a binary determining circuit that links the second unit of text to the first unit of text in a structural representation of discourse if the relationship between the first unit of text and the second unit of text is neither a coordination relationship nor a subordination relationship.
  - 20 2. The system of discourse analysis of claim 1, wherein the system is used to analyze a written text.
  3. The system of discourse analysis of claim 1, wherein the system is used to analyze a speech text converted from an utterance into a plurality of text units.
  4. The system of discourse analysis of claim 1, wherein the system is
    - 25 used to analyze English text.
    5. The system of discourse analysis of claim 1, wherein the system is used to analyze legal writing.
    6. The system of discourse analysis of claim 1, wherein the system is used to analyze medical writing.
    - 30 7. The system of discourse analysis of claim 1, wherein the system is used to analyze any type of communication.
    8. The system of discourse analysis of claim 1, wherein the system is used to analyze any type of recorded communication.

9. The system of discourse analysis of claim 1, wherein the structural representation is a tree structure.

10. The system of discourse analysis of claim 10, wherein the tree structure is an open right tree structure.

5 11. The system of discourse analysis of claim 1, wherein the analysis is accomplished by comparing a structural representation of discourse for a specific genre to the structural representation of discourse for the text.

12. The system of discourse analysis of claim 12, wherein the analysis is accomplished by comparing visualizations of the structural representation of discourse  
10 for a document genre to the structural representation of discourse for the text.

13. A method of discourse analysis of a text, comprising:  
segmenting a text into a plurality of units of text;  
for each of the plurality of units of text:

15 determining if that unit of text is a modifier providing context setting information for information encoded further along in the text,

determining if that unit of text is an operator providing at least one of, commentary on aspects of organizational structure, logical structure, and expressing emotional reaction to a context, and

20 determining if that unit of text is a content unit providing, expression of at least one of state, action and belief, that is a property of some entity;  
inserting a first unit of text into a structural representation of discourse as a root node;

for each one of the plurality of units of text not yet inserted into the tree:

25 selecting that unit of text as a current unit of text,  
selecting that node in the structural representation of discourse to attach the current unit of text to;

30 if the current unit of text continues a discourse activity begun or continued by the first node in the structural representation of discourse; if the current unit of text is determined to continue the discourse: replacing the selected node with a coordination node,

adding the selected node as left child node of the coordination node, and adding a new node representing the current unit of text as a right child node of the coordination node;

5 if the next unit of text elaborates upon or interrupts the discourse activity begun by the first node in the structural representation of discourse , replace first node with a subordination node, add first node as left child node, add selected next unit of text as right child node;

10 if the relationship between the next unit of text and the first node in the structural representation of discourse is not a coordination and not a subordination, replace the first node with a binary node, add first node as the left child node, add the next unit of text as the right child node;

14. The discourse analysis method of claim 1, wherein the method is used to analyze writing.

15 15. The discourse analysis method of claim 1, wherein the method is used to analyze speech converted to at least a first unit of text unit and a second unit of text unit.

16. The discourse analysis method of claim 1, wherein the method is used to analyze English text.

20 17. The discourse analysis method of claim 1, wherein the method is used to analyze other human language texts.

18. The discourse analysis method of claim 2, wherein the method is used to analyze legal writing.

19. The discourse analysis method of claim 2, wherein the method is used to analyze medical writing.

25 20. The discourse analysis method of claim 1, wherein the method is used to analyze any type of communication.

21. The discourse analysis method of claim 1, wherein the method is used to analyze any type of recorded communication.

30 22. The discourse analysis method of claim 1, wherein the structural representation is a tree structure.

23. The discourse analysis method of claim 1, wherein the structural representation is an open right tree structure.

24. The discourse analysis method of claim 2, wherein the analysis is accomplished by comparing a structural representation of discourse genre to the structural representation of discourse of the text.

5 25. The discourse analysis method of claim 12, wherein the analysis is accomplished by comparing visualizations of a structural representation of discourse genre to visualizations of the structural representation of discourse of the text.

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